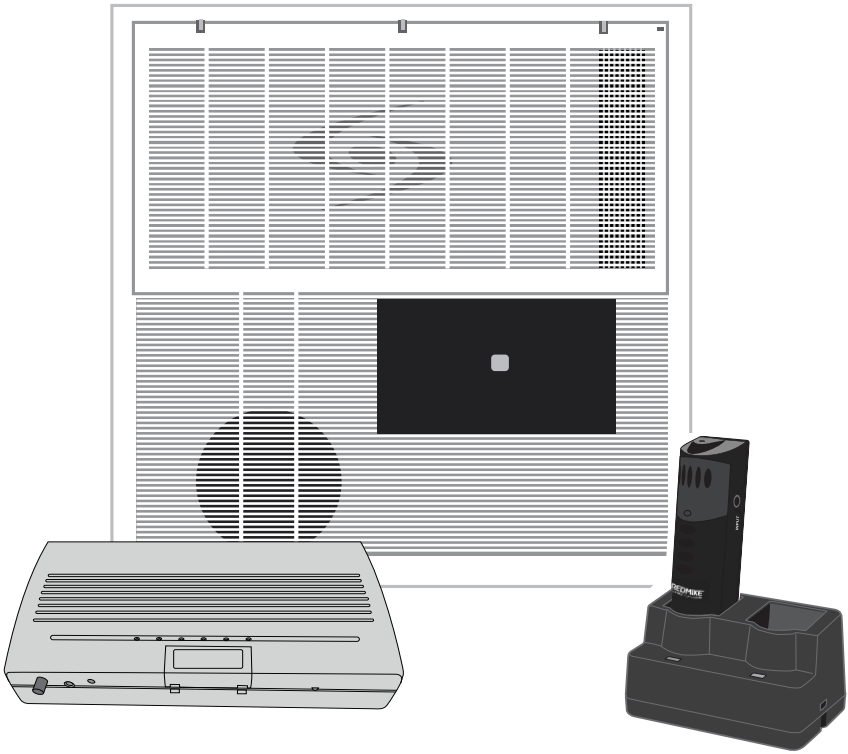
lightspeed™

TOPCAT

Classroom Audio System



User Manual

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use the apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding- type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. When the mains plug or appliance coupler is used as the disconnect device, it shall remain readily accessible.
16. Please keep the unit in a good ventilation environment.
17. Warning: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
18. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS CONT'D

To avoid potential equipment damage and/or serious injury, READ AND FOLLOW all safety precautions when installing the TOPCAT. WARNINGS are included throughout the procedural steps in this guide, and are repeated below for emphasis.

- **USE A LICENSED ELECTRICIAN FOR POWER CONNECTIONS.** The TOPCAT system uses standard 100 – 240VAC power. Obtain the services of a licensed electrician when supplying and connecting power to the ceiling enclosure. BE SURE electrical installation complies with local building codes. Improperly installing and/or connecting power to the system may result in EQUIPMENT DAMAGE, serious INJURY and/or DEATH.
- **DO NOT INSTALL ALONE.** The ceiling enclosure weighs approximately 20 lbs (9 kg), and requires at least two people to install. DO NOT install alone.
- **USE SUITABLE LADDERS.** use proper ladders or support platforms when installing the TOPCAT enclosure. DO NOT stand on chairs, tables, or other unsuitable surfaces.
- **SUPPORT THE CEILING ENCLOSURE PROPERLY.** DO NOT allow the full weight of the ceiling enclosure to rest on the tile grid of the ceiling. The ceiling enclosure is designed to be suspended at TWO POINTS by suspension wires (secured to rafters or other suitable building structure) and to rest LIGHTLY on the tile grid.

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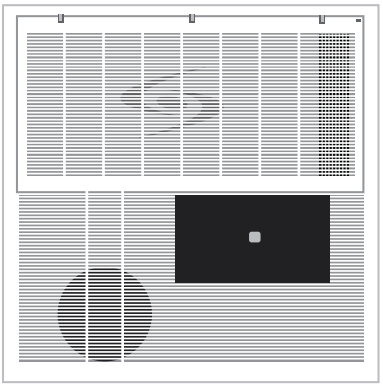
SECTION 1:

OVERVIEW

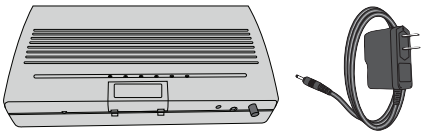
SYSTEM COMPONENTS AND UNPACKING

The standard configuration of the TOPCAT® will contain:

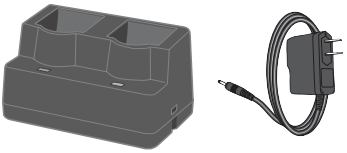
TOPCAT



Media Connector and Power Supply



Cradle Charger and Power Supply



REDMIKE® VC Volume Control Microphone

SYSTEM COMPONENTS AND UNPACKING

CONT'D

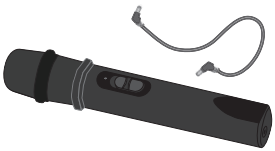
Audio Cable Kit

Hardware for optional wall-mounting of Media Connector and ISR

OPTIONAL COMPONENTS

Optional equipment which may be part of your TOPCAT system:

REDMIKE® Share Handheld Mic & Charger Cable



DC Extension Cable

SYSTEM COMPONENTS

Equipment which may be part of your TOPCAT:

Standard Components (U.S. and Canada)	
TC	TOPCAT all-in-one ceiling mount system
24V-2.5-NA	24V/2.5A power supply for TOPCAT
RMV	REDMIKE VC microphone with battery
NH2A27	AA NiMH rechargeable sensing battery for REDMIKE
AC-RMLC2	REDMIKE lavaliere cord
RMCC	REDMIKE cradle charger
5V-1.0-NA	5V/1.0A power supply
MC	Media Connector with power supply
MSC3535	3.5mm to 3.5mm stereo audio cable
CA-AD-RCA2-35	Dual RCA jack – 3.5mm stereo plug adapter

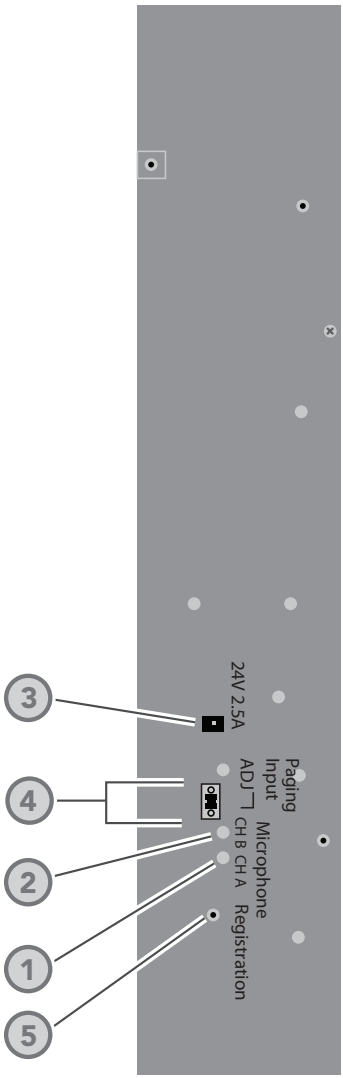
Standard Components (Outside U.S. and Canada)	
TC-1881	TOPCAT all-in-one ceiling mount system
24V-2.5-__	24V/2.5A power supply for TOPCAT (specify country)
RMV	REDMIKE VC microphone with battery
NH2A27	AA NiMH rechargeable sensing battery for REDMIKE
AC-RMLC2	REDMIKE lavaliere cord
RMCC-INT	REDMIKE cradle charger (universal plug attachments)
5V-1.0-INT	5V/1.0A power supply (universal plug attachments)
MC-1881	Media Connector with power supply
MSC3535	3.5mm to 3.5mm stereo audio cable
CA-AD-RCA2-35	Dual RCA jack – 3.5mm stereo plug adapter

Optional Accessories	
RMS	REDMIKE Share handheld microphone w/battery pack
NH2APK	AA Rechargeable battery (REDMIKE Share)
TK250M	Noise-canceling headset microphone
TCC7	Charging cable for REDMIKE Share
RCA6	6' dual RCA audio cable
RCA24	24' dual RCA audio cable
MMC2535	Audio patch cable (2.5 mm mono to 3.5 mm mono)
DCPEX-__	50' plenum rated DC Power cable kit (specify country)

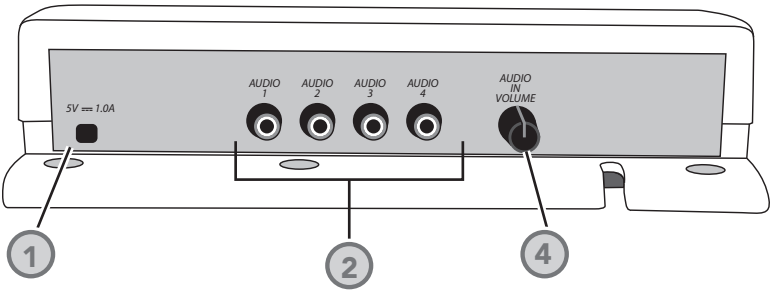
TOPCAT SIDE PANEL CONTROLS AND CONNECTIONS

1. **CH A VOLUME:** Controls the volume level for microphone set to channel A. It is preset at the factory to its 11 o'clock position. Turn clockwise to increase volume or counter clockwise to decrease volume.
2. **CH B VOLUME:** Controls the volume level for microphone set to channel B. It is preset at the factory to its 11 o'clock position. Turn clockwise to increase volume or counter clockwise to decrease volume.
3. **AUX POWER INPUT CONNECTOR (OPTIONAL):** For use during installations where AC power is not available in the ceiling. Accepts 24VDC, 2.5A connector from an external power supply.
4. **PAGEFIRST INPUT AND ADJUST:** Connect the input from optional PageFirst sensor when interfacing with the building's paging system. Use the ADJ control to adjust the sensitivity if needed.
5. **REGISTRATION BUTTON:** This button is used to synchronize the TOPCAT with the Media Connector.

SIDE VIEW

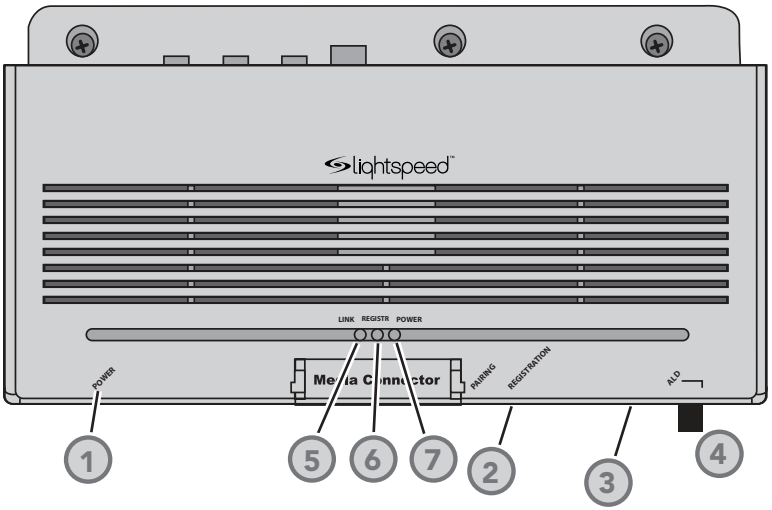


MEDIA CONNECTOR CONTROLS AND CONNECTIONS



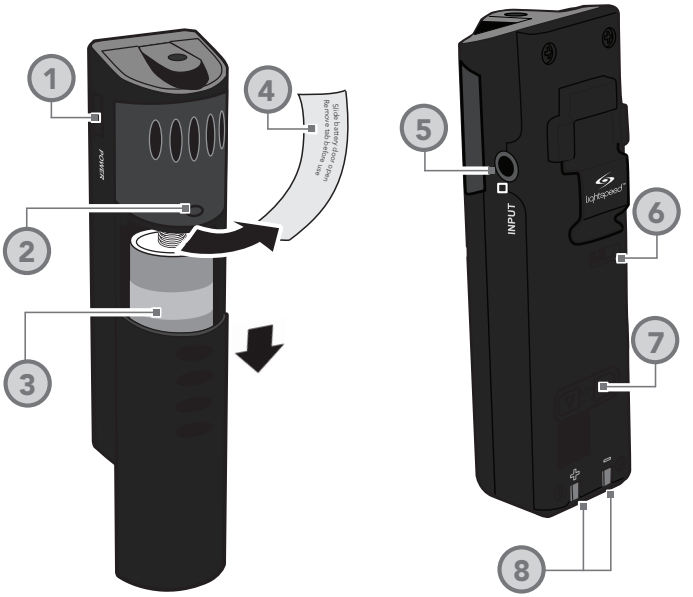
1. **POWER CABLE INPUT:** Plug the power supply (5V/1.0A) into this jack.
2. **FOUR AUDIO INPUTS:** Connect standard audio devices to any of the 3.5mm stereo inputs. A provided cable allows connectivity to RCA stereo outputs common on DVD players and televisions
3. **VOLUME CONTROL:** Controls the output volume of the media connector.

MEDIA CONNECTOR CONTROLS AND CONNECTIONS CONT'D



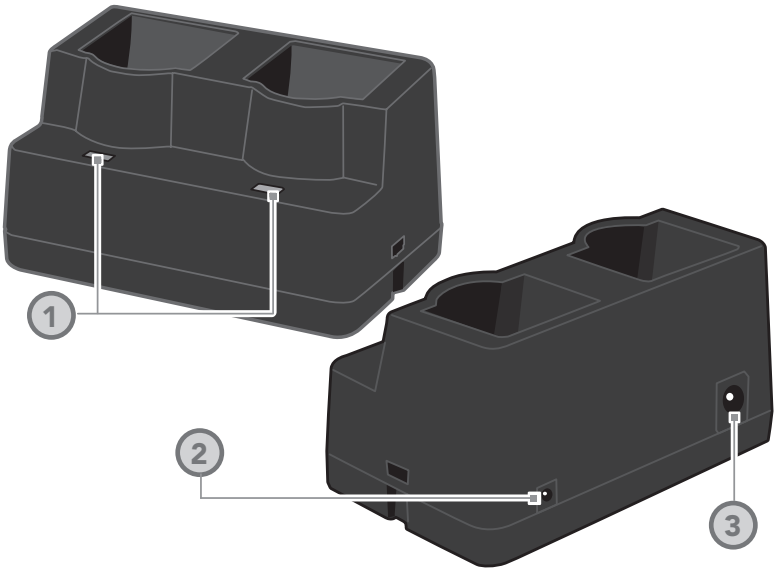
1. **SYSTEM POWER SWITCH:** System power is turned on or off with this pushbutton. When power is on, the blue power LED lights.
2. **REGISTRATION PUSHBUTTON:** Pushing the registration button in conjunction with the registration button on the TOPCAT module will cause the two modules to synchronize as an operating system. Refer to the Registration Procedure in this manual.
3. **ALD AUDIO OUTPUT:** 3.5mm stereo jack sends audio signal to external equipment such as a recorder or an assistive listening device like Lightspeed's 370 Personal FM System.
4. **ALD AUDIO VOLUME CONTROL:** Adjusts the audio signal level output through the ALD audio output connector.
5. **RF LINK LED:** This LED is lit anytime the RF link is established between Media Connector and the TOPCAT. This LED will glow green while the system modules remain linked.
6. **REGISTRATION LED:** The amber LED blinks when a link is being established. The registration LED goes out and the link LED is solid green when the link is established.
7. **POWER LED:** This LED glows blue when the system is powered on.

REDMIKE VC (Volume Control) CONTROLS AND CONNECTIONS



1. **POWER/MUTE BUTTON**
2. **POWER/LOW BATTERY INDICATOR:** A blue light indicates the REDMIKE VC is on and fully charged. A red light indicates a charge is needed.
3. **BATTERY COMPARTMENT:** To open, slide the door downward. The battery should only be replaced by a Lightspeed AA rechargeable sensing battery (part #NH2A27).
4. **YELLOW PROTECTIVE TAB:** Slide the battery compartment door and remove this disposable protective tab before use.
5. **AUDIO/MICROPHONE INPUT:** Use this input to plug in a laptop, MP3 player or other audio source to wirelessly transmit audio to be played through the system. Alternatively, an external microphone can be connected.
6. **CHANNEL SELECT SWITCH (CH A/B):** Use this to choose channel A or B. If you are using a single microphone, we recommend using channel A.
7. **VOLUME CONTROLS (UP - DOWN)**
8. **CHARGER CONTACTS (+ -):** These contacts interface with the charging tabs when the REDMIKE VC is placed in the RMCC cradle charger.

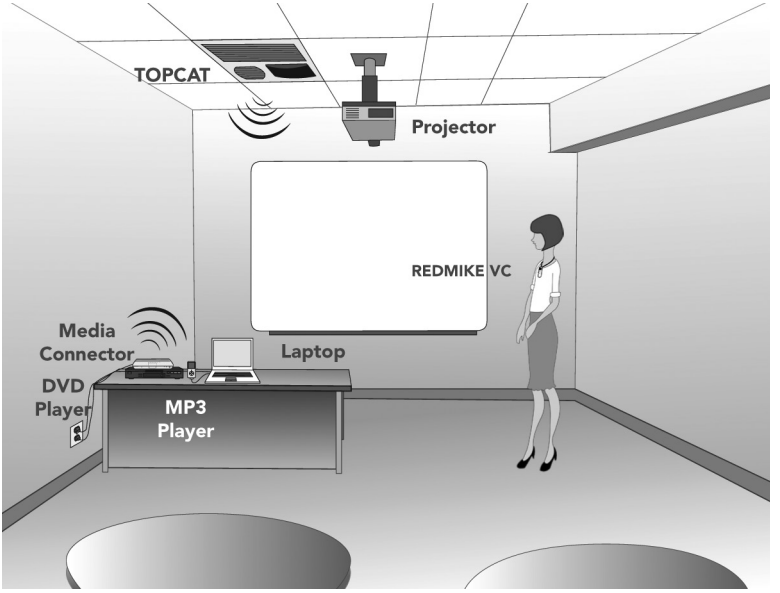
CRADLE CHARGER CONTROLS AND CONNECTIONS



1. **CHARGE INDICATORS:** The light glows red while the REDMIKE is charging. When fully charged, the light will glow green. A blinking red light indicates that no battery is sensed, (REDMIKE Yellow Protective Tab may not have been completely removed—see page 12, item 4.) A blinking green LED means a non-Lightspeed battery has been installed (possibly an alkaline battery).
2. **DC POWER PORT:** Connect the DC power cord here.
3. **OPTIONAL CHARGING PORT:** Plug the charging cord for the optional REDMIKE Share microphone here.

SECTION 2:

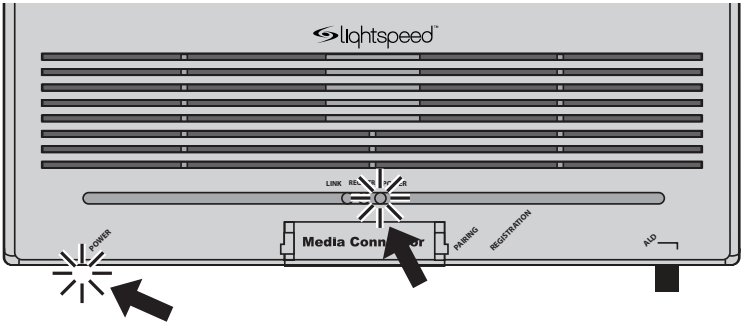
DAILY OPERATION



1. TURN THE SYSTEM ON

Press the POWER button on the Media Connector. The blue LED will glow.

NOTE: since the TOPCAT is mounted in the ceiling, the Media Connector is used to remotely power the system on and off.

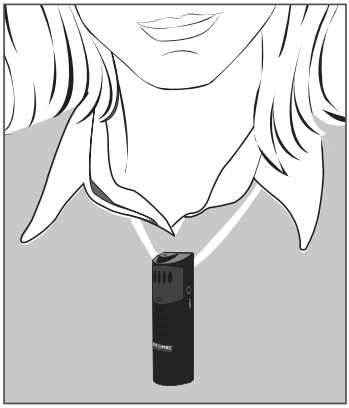


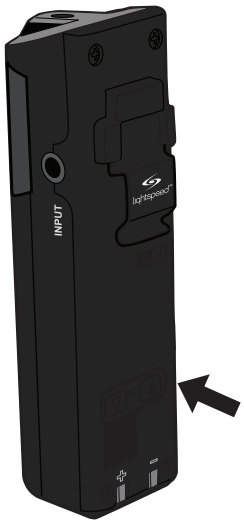
2. OPERATING THE REDMIKE VC

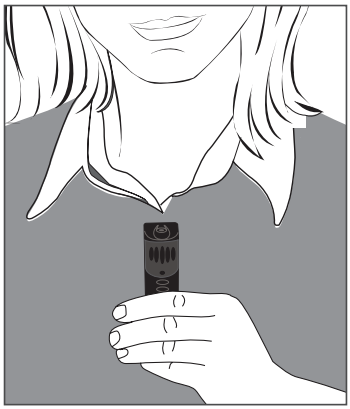
1. Ensure the REDMIKE VC is fully charged. The charger LED will glow green.
2. Remove the REDMIKE VC from the cradle charger and turn it on.
3. Slip the REDMIKE VC with lanyard around the neck and position the top of the microphone just below the collarbone. NOTE: Positioning of the REDMIKE VC is critical for proper volume adjustment.
4. Speak using a conversational level and TOPCAT will evenly distribute your voice throughout the room.
5. The TOPCAT has been set-up to provide optimum volume level during installation.

   REMEMBER: This equipment supplements the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.
6. To fine-tune the volume, use the up/down buttons on the back of the REDMIKE VC.

   NOTE: the REDMIKE VC has 4 volume levels up and 4 levels down from the mid point (9 levels total).
7. If a second REDMIKE VC was purchased, repeat these steps. This microphone will be marked with a "CH. B" sticker on the back, indicating it is preset to channel B.
8. To use the REDMIKE VC as a handheld pass-around microphone:
   a. unclip the lanyard,
   b. hold the lower portion of the microphone,
   c. ensure the IR emitter is facing outward,
   d. position the top of the microphone at about collarbone height.







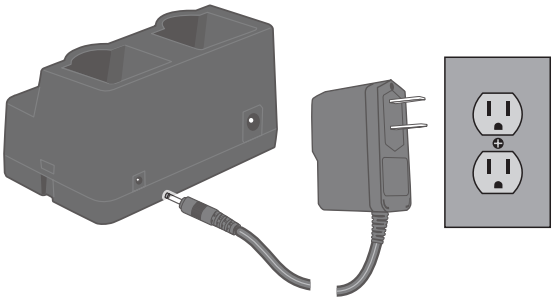
3. CHARGING THE REDMIKE VC

Before use, the REDMIKE VC should be charged. It will take 8-9 hours for the REDMIKE VC to obtain a full charge. A fully charged REDMIKE VC will last for over 7 hours of use. If microphones are used daily, they should be kept in the cradle – microphones can be left in a cradle charger constantly for up to 2 weeks without causing degradation to battery life.

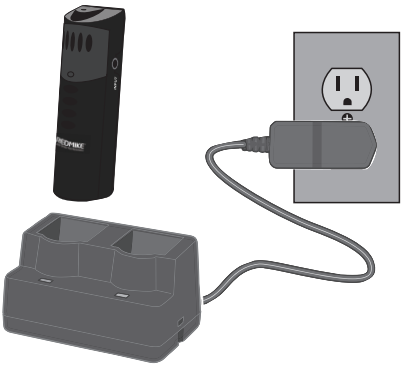
A red light on the charging cradle indicates the REDMIKE VC is charging. A green light indicates that charging is complete and a full charge has been reached. A blinking light indicates a charging or sensing error. See Troubleshooting section for more information.

REDMIKE VC incorporates alkaline protection into the microphone design. Always use a Lightspeed rechargeable sensing battery. Replacement AA NiMH batteries may only be purchased through Lightspeed Technologies (part # NH2A27).

1. Plug power cord into the cradle charger and then plug the AC end into an electrical outlet.



2. Place the REDMIKE VC into the cradle. The LED on the cradle will glow red indicating charging has started. When the REDMIKE VC is fully charged, the LED on the cradle charger will change to green.

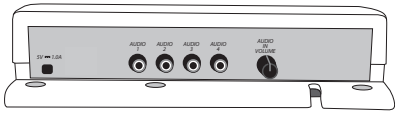


4. USING THE MEDIA CONNECTOR

(For setup instructions, refer to the installation guide)

The Media Connector can be used as the primary volume control for the audio sources you've connected.

1. Connect the audio source(s) to the Media Connector using the 3.5mm cables provided.
2. Set the audio source volume to provide sound through the TOPCAT.
3. Use the Media Connector volume control to increase or decrease the sound level.



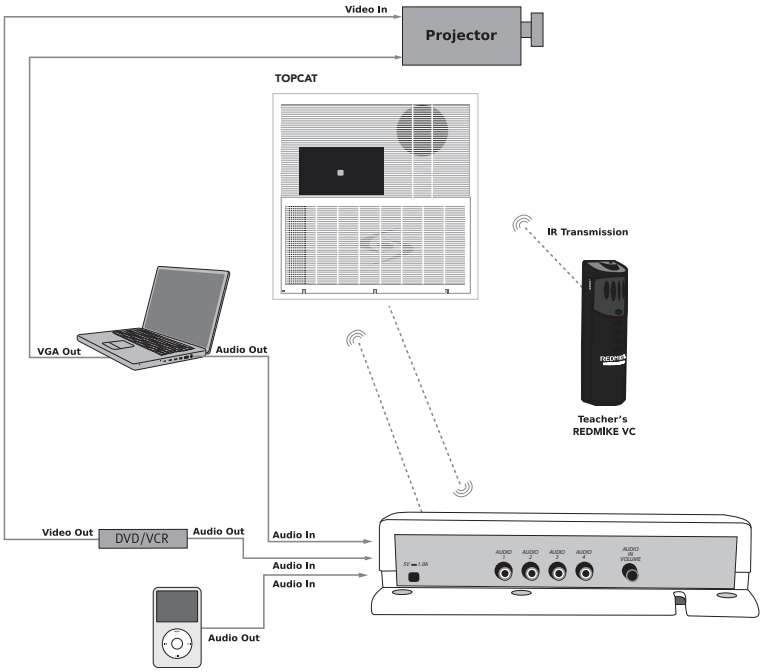
NORMALIZING AUDIO SOURCE VOLUME LEVELS

Use the Media Connector as the master audio volume control for the classroom. When two or more audio sources are connected, you will need to normalize volume settings by setting all connected audio sources to the same sound level while leaving the Media Connector volume control set to its center setting. The Media Connector is an audio mixer using a master volume control to adjust the volume of all audio sources at once. Use the following procedure to set audio source volumes:

1. Connect the multimedia audio sources to the Media Connector using the 3.5mm cables provided.
2. Set the master volume control on the Media Connector to its center position.
3. Turn on an audio source that does not have an accessible audio level control. (DVD, VCR player)
4. Adjust the Media Connector master volume control so the audio level playing through the speaker is appropriate for the classroom.
5. Turn off the first audio source.
6. Turn on the second audio source. Use its volume control to balance the audio output to the same audio level played through the speaker as the first source.
7. Repeat steps 5 and 6 for the remaining audio sources.
8. Now, the Media Connector's master volume can be used to increase or decrease the volume level for all audio sources as desired.

5. AUDIO INTEGRATION

The Media Connector is designed to integrate multiple audio sources quickly and easily.



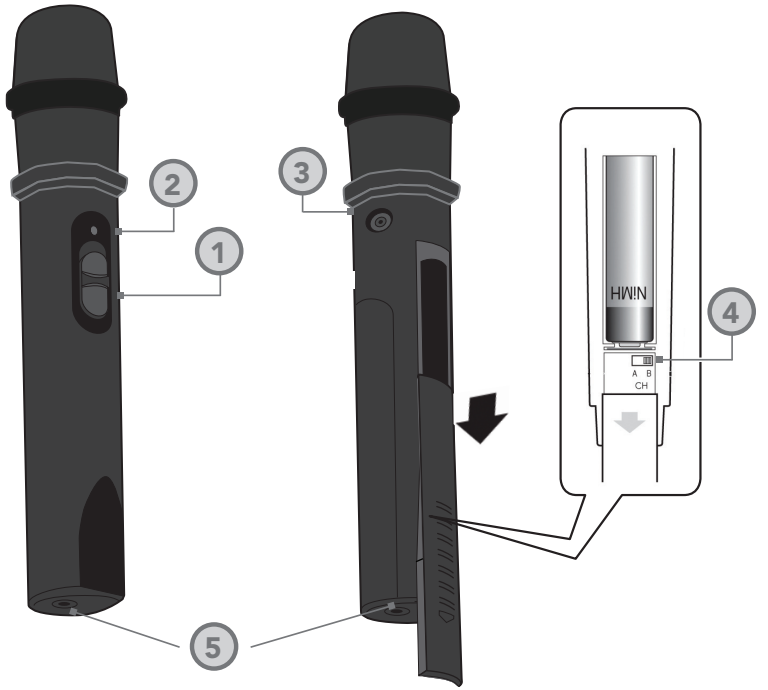
6. TIPS TO OBTAIN OPTIMUM AUDIO PERFORMANCE

- Speak in a natural voice. A normal conversational speech level will provide an adequate signal. It is not necessary to increase the intensity of your voice—the audio system provides adequate amplification (approximately 5 – 10 dB) above ambient room noises.
- Avoid wearing jewelry that may rub or bump against the microphone.
- Turn the REDMIKE VC off during private conversations with a student, parent, or other classroom visitor. You can also cover the LED lens on top of the REDMIKE VC to block the signal.
- Recharge microphone(s) each night. When recharged nightly, the microphone will last through a typical school day.

SECTION 3:

OPTIONAL ACCESSORIES

REDMIKE SHARE: CONTROLS AND CONNECTIONS

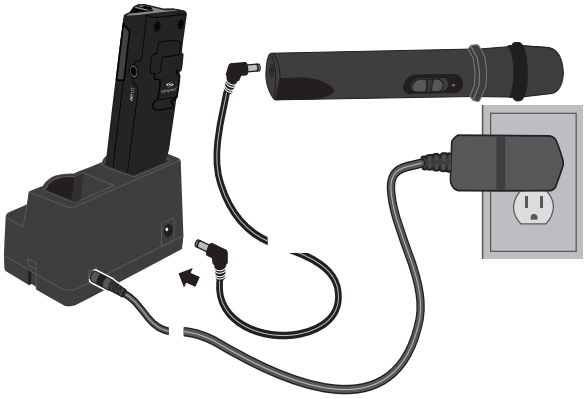


1. **POWER SWITCH:** slide switch up for on and down for off.
2. **POWER/CHARGE INDICATOR:** this light glows blue when turned on and turns off to indicate low battery level. When charging, the light glows red.
3. **AUDIO INPUT:** plug a laptop, MP3 player or other audio device into this jack to wirelessly transmit the audio signal to be played through the system.
4. **CHANNEL SELECT SWITCH (CH A/B):** Located in the battery compartment, this switch is set to channel B at the factory.
5. **CHARGER INPUT:** Plug the charging cable from the REDMIKE cradle charger into this jack.

REDMIKE SHARE: CHARGING

Before use, the REDMIKE Share should be charged. It will take 8-10 hours for the REDMIKE Share to obtain a full charge. A fully charged REDMIKE Share will last for over 7 hours of use. If the microphone is used daily, it should be kept plugged into the charging cradle - REDMIKE Share can be left connected to a cradle charger for up two weeks without causing degradation to battery life.

1. Ensure that the REDMIKE Share is turned off.
2. Make sure the cradle charger is plugged into a wall outlet. Connect one end of the charging cable into the jack labeled CHARGER on the bottom of the REDMIKE Share.
3. Plug the other end into the charging jack on the back of the cradle charger.
4. The LED on the microphone will glow red to indicate charging.
5. Leave the REDMIKE Share plugged in overnight (8-10 hours) to obtain a full charge.
6. When charging is complete, the LED will blink red.



REDMIKE SHARE: INITIAL SET-UP

1. Ensure the TOPCAT is on. The blue LED on the Media Connector will glow.
2. Turn on the REDMIKE Share by sliding the switch to the up position.
3. Grip the barrel in the center section. Avoid covering the infrared emitters just below the microphone grille. This could interrupt signal transmission.
4. Use a flat blade screwdriver to slowly adjust the channel B volume on the TOPCAT so that the user can barely hear their own voice while speaking into the microphone.

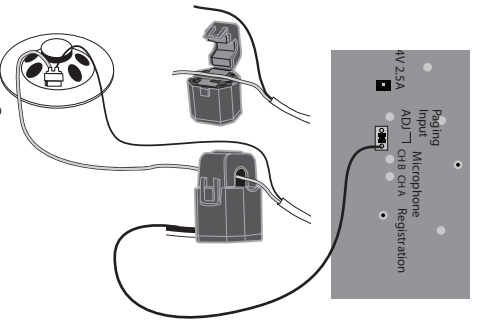
REMEMBER: This equipment is designed to supplement and distribute the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.

PAGEFIRST INTERFACE

This optional feature interfaces with an independent classroom paging system. When the page is broadcast, all audio from the system is muted, ensuring important and even emergency school-wide messages are never missed.

How it works:

1. PageFirst sensor clip is hung around the lead wires attached to the classroom paging speaker.
2. The clip is connected to the TOPCAT.
3. As a page is broadcast, the sensor clip detects the audio signal through induction and immediately mutes the TOPCAT.
4. When the page is over, the audio from the TOPCAT returns to normal volume level.



(For full installation details, refer to the TOPCAT Installation Guide.)

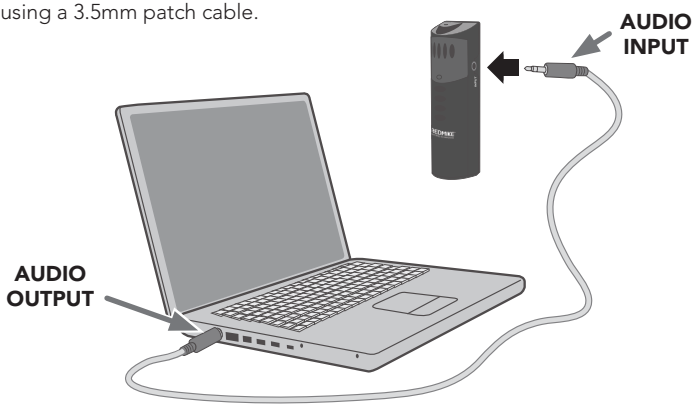
USING THE REDMIKE VC TO AMPLIFY EXTERNAL AUDIO EQUIPMENT

The REDMIKE VC includes a 3.5mm audio input jack to connect to an audio source like a laptop or MP3 player. The REDMIKE VC will transmit the audio signal to be played through the system.

If your system includes two REDMIKE VCs, we recommend using channel B (student mike) to amplify the external audio equipment so the teacher's volume on the channel A (teacher mike) does not have to be adjusted.

To determine which REDMIKE VC is set to channel B, you can look at the label or switch on the back of the microphone.

1. Adjust the volume of your laptop or MP3 device to about 25% of maximum.
2. Plug your external audio equipment (for example, laptop), into the input on the REDMIKE VC labeled "INPUT" using a 3.5mm patch cable.

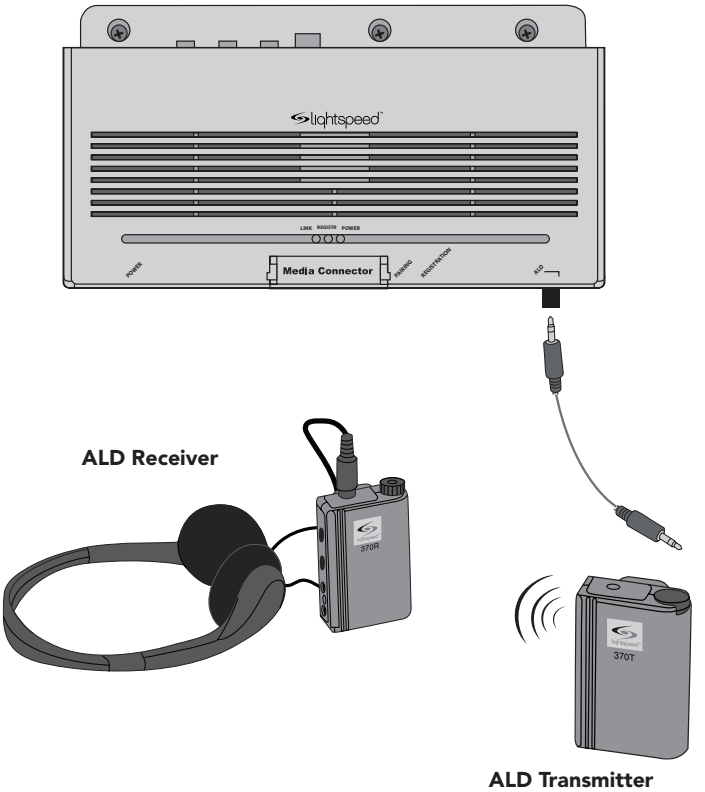


2. Adjust the volume of the REDMIKE VC or audio source to achieve desired loudness.

   NOTE: turning up the volume too high on the audio source can cause excessive distortion in the audio.

OUTPUT TO ASSISTIVE LISTENING DEVICE (ALD)

1. Turn the ALD (Assistive Listening Device) volume control on the Media Connector front panel all way the down.
2. Determine the size and type of audio input jack on the device as many manufacturers' products differ in connector size and shape. The Lightspeed 370 Personal FM System requires a 3.5mm to 3.5mm patch cable (part# MMC3535).
3. Connect a patch cable from the ALD's microphone jack or AUX input to the 3.5mm audio jack labeled "ALD OUT" on the front of the Media Connector.
4. With the TOPCAT and ALD turned on, speak into the REDMIKE VC and slowly adjust the ALD volume control on the Media Connector until the appropriate audio level is attained in the ALD's receiver headphones.
5. It may be necessary to adjust the volume on the Personal FM receiver to achieve appropriate volume level.



SECTION 4:

TROUBLESHOOTING

COMMON PROBLEMS AND SOLUTIONS

Note: Most problems are directly related to low battery power. Please run through the "Battery Check" items first. For remaining troubleshooting, use known good, fully-charged batteries.

ALL PROBLEMS: most problems are related to low battery power.

SOLUTION: battery check

- Confirm the Power LED is blue.
- Confirm batteries are charged each night.
- Confirm proper batteries are used. The REDMIKE VC requires the Lightspeed NH2A27 rechargeable sensing battery for proper charging. The REDMIKE Share uses the NH2APK rechargeable battery pack.
- Make sure the microphones are turned off while charging so a full charge is attained. Full charge will last eight hours.
- Inspect the battery contacts. Clean and adjust if necessary.

PROBLEM: hearing static

SOLUTION: follow these steps to eliminate static.

- Ensure sensor is in optimum location (refer to sensor placement in Installation Guide). A single sensor will cover a 1600 sq. ft. (150 sq. meters) enclosed classroom with a ceiling height of 12 ft. (3.5 m) or less.
- Ensure that no other REDMIKE VC/REDMIKE Share is operating on the same channel. Check the channel switch setting on the back of the REDMIKE VC or in the battery compartment of the REDMIKE Share.

PROBLEM: low volume or feedback

SOLUTION: follow these steps to eliminate low volume or feedback.

- Ensure microphone is positioned appropriately, just below the collar bone.
- Check volume level on the REDMIKE VC. If the volume is too high, feedback will occur. Adjust accordingly.

PROBLEM: no sound from speaker

SOLUTION: Follow these steps to produce sound from speakers.

- Turn the Media Connector on. Confirm that the POWER light located on the top panel switch is on.
- Confirm signal is being received at the ISR on the TOPCAT. The IR signal light will be red (green for channel B) indicating a signal is being received.
- Confirm that REDMIKE VC is turned on. There will be a blue LED on the microphone to indicate it is powered on.

PROBLEM: drop out

SOLUTION: follow these steps to eliminate drop out.

- Ensure that TOPCAT is not installed too close to ceiling light fixtures.
- If using PageFirst feature, decrease sensitivity to approximately 8:00.

If you review these instructions and still have questions, write down the serial number and model number of your system and call Lightspeed Technical Services at 800.732.8999, 5 a.m. – 5 p.m., PST. ***Customers outside of the U.S. should contact their local reseller.***

TOPCAT AND MEDIA CONNECTOR REGISTRATION

The TOPCAT and Media Connector must be registered or synchronized with each other before they will operate together. (These components come pre-registered from the factory.) On occasion, one of these modules may be replaced so the registration process will be needed.

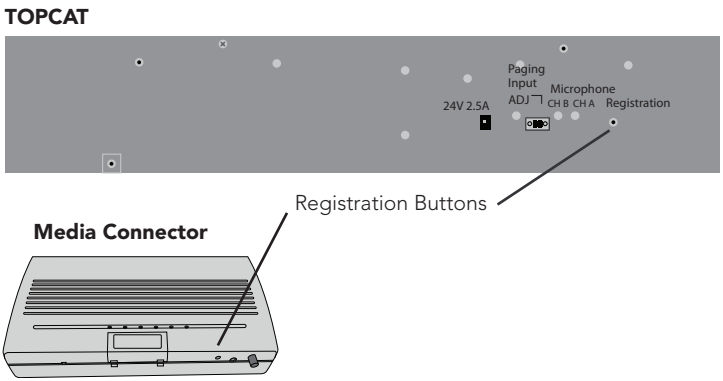
Use the following table to determine if your TOPCAT and Media Connector are registered.

MC Power	MC LINK LED	Status
OFF	All LEDs Off	Turn MC Power on Blue LED is LIT
ON/ Unregistered	Blinking Green	Not Linked - Needs to be registered
ON	Continuous Green	Linked to TOPCAT

NOTE: If the link LED on the Media Connector is continuous green, the following procedure does not need to be done.

To register TOPCAT with its Media Connector:

1. Locate the registration buttons on the TOPCAT and Media Connector.



2. Start the procedure by pushing the registration button on the TOPCAT. An amber LED will light. You will have 20 seconds to push the corresponding registration button on the Media Connector.
3. Push the registration button on the Media Connector. The amber LED will begin to blink. When registration is complete, the link LED will glow green and the amber LED will go off.

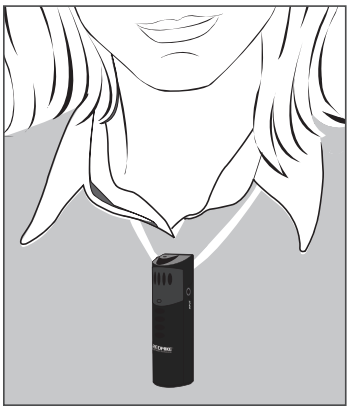
NOTE: If after pushing the Registration button on TOPCAT the corresponding button on the Media Connector is not pushed within 20 sec., the amber LED will go from a slow blinking to a fast blinking. This means the registration process has timed out. Wait until the amber LED stops blinking to start the registration again.

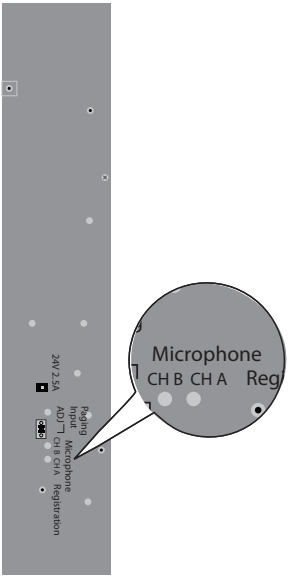
SETUP AND OPERATION OF THE REDMIKE VC AND TOPCAT

Once the REDMIKE is charged, follow these steps to set it up for use.

NOTE: This procedure is easier with two people.

1. Turn the TOPCAT power on. The blue LED on the Media Connector will glow.
2. Remove the REDMIKE VC from the cradle charger and turn it on.
3. Slip the REDMIKE VC with lanyard around the neck and position the top of the microphone just below the collarbone. NOTE: Positioning of the REDMIKE VC is critical for proper volume adjustment.
4. Set the REDMIKE VC volume to its midpoint. Push the up arrow button 9 times followed by pushing the down arrow button 4 times. The REDMIKE VC is at its midpoint.
5. Use a flat blade screwdriver to slowly adjust the volume of the corresponding channel (A or B) on the TOPCAT so that the user can barely hear their own voice while speaking into the microphone. Each REDMIKE VC has its channel pre-set to either A or B, as indicated on the back of the Mic. **REMEMBER:** This equipment supplements the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.
6. Once initial volume level is set, walk around the room and listen for audio dropout and overall audio quality.
7. The teacher can now use the controls on the REDMIKE VC to adjust the volume level from anywhere in the room. The microphone volume control has 4 steps up and 4 steps down from the mid point (9 levels total).
8. If a second REDMIKE VC was purchased, repeat steps 2-5.





SECTION 5:

WARRANTY, SAFETY & SPECIFICATIONS

FIVE-YEAR LIMITED WARRANTY

Lightspeed Classroom Audio Systems are guaranteed against malfunction due to defects in materials and workmanship for a period of FIVE (5) YEARS, beginning at the date of the purchase invoice. If such malfunction occurs, the product will be repaired or replaced (at Lightspeed's option) without charge during the warranty period.

Lightspeed's Warranty Exchange Program applies to all infrared systems within the five (5) year warranty period. If an infrared product or component has an issue that requires service, a refurbished replacement will immediately be sent to the customer to minimize downtime. Customers will receive the exchange product(s) or component(s) within 2-3 days. A prepaid return label will be included with exchanged products so original malfunctioned equipment can be returned to Lightspeed. Any exchanged equipment will remain covered under the original five (5) year warranty.

1. Warranty on infrared microphones is FIVE (5) YEARS.
2. Warranty on Lightspeed NiMH rechargeable batteries is one (1) year.
3. Prepaid shipping label provided by Lightspeed for warranty repairs within the U.S. Customers outside the U.S. should contact their local reseller for warranty repair instructions.
4. Warranty does not extend to finish, appearance items, or malfunctions due to abuse or operation other than specified conditions, nor does it extend to incidental or consequential damages. Repair by other than Lightspeed or its authorized service agencies will void this guarantee. Information on authorized service agencies is available from Lightspeed Technologies, Inc.

Our Service Department (800.732.8999, 5 a.m. – 5 p.m., PST) will handle all your repair/replacement needs. ***Customers outside the U.S. should contact their local reseller for service repair/replacement needs.***

SAFETY WARNINGS AND CERTIFICATIONS

CAUTION

RISK OF ELECTRICAL SHOCK
DO NOT OPEN

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

USE A LIGHTSPEED SUPPLIED BATTERY ONLY

CAUTION

RISK OF ELECTRICAL SHOCK
DO NOT OPEN

CERTIFICATIONS

c UL us LISTED

This product is listed to UL standards and requirements for electrical safety by Underwriters Laboratories Inc.

CE

This product conforms with the essential requirements of the following European Union Directives: 89/336/EEC, 92/31/EEC, 93/68/EED, and 2004/108/EC Electromagnetic Compatibility Directives.

Lightspeed Technologies launched a formal product recycle program in Europe that complies with the European Union Directive 2002/96/EC on Waste Electrical and Electronic Equipment ("WEEE Directive"). Please visit our website at www.Lightspeed-tek.com for contact information.

ROHS

This product is manufactured using lead-free processes and is free of other materials harmful to the environment. It conforms to the most stringent new European guidelines for consumer products (RoHS).

FC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits of a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Caution: To maintain the compliance with the FCC's RF exposure guideline, place Media Connector & TOPCAT at least 20 cm from nearby persons.

PRÉCAUTIONS DE SÉCURITÉ ET CERTIFICATIONS

ATTENTION
RISQUE D'ÉLECTROCUTION
NE PAS OUVRIR

CONFORMÉMENT AUX NORMES D'INSTALLATION APPLICABLES, CE PRODUIT DOIT ÊTRE INSTALLÉ PAR UNE PERSONNE FAMILIARISÉE AVEC LA CONCEPTION ET LE FONCTIONNEMENT DU PRODUIT ET CONSCIENTE DES RISQUES ENCOURUS.

UTILISEZ UNIQUEMENT LA BATTERIE LIGHTSPEED FOURNIE

CERTIFICATIONS

Ce produit est certifié conforme aux normes et aux exigences UL en matière de sécurité électrique par Underwriters Laboratories Inc.

Ce produit est conforme aux principales exigences des directives de l'Union Européenne suivantes : 89/336/CEE, 92/31/CEE, 93/68/DEE, et 2004/108/CE relatives à la compatibilité électromagnétique.

Lightspeed Technologies a lancé un programme de recyclage de produits en Europe conformément à la directive de l'Union Européenne 2002/96/CE relative aux déchets d'équipements électriques et électroniques (directive « DEEE »). Veuillez visiter notre page Web www.Lightspeed-tek.com pour plus de renseignements.

Ce produit est fabriqué en utilisant des processus sans plomb ni aucune autre matière nuisible à l'environnement. Il est conforme aux nouvelles règles européennes les plus strictes en matière de biens de consommation (RoHS).

Ce dispositif est conforme à l'article 15 de la réglementation FCC. Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas causer d'interférence nuisible et (2) ce dispositif doit accepter toute interférence reçue, notamment les interférences pouvant occasionner un fonctionnement non souhaité.

Tout changement ou modification n'ayant pas fait l'objet d'une autorisation expresse émanant de la partie responsable de la conformité pourraient entraîner la perte du droit d'usage de l'équipement par l'utilisateur.

Cet équipement a été testé et certifié conforme aux restrictions pour les appareils numériques de Classe B, conformément à l'article 15 de la réglementation FCC. Ces restrictions visent à assurer une protection raisonnable contre les interférences nuisibles dans les installations résidentielles.

Cet équipement produit, utilise et peut émettre de l'énergie de fréquence radio et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux communications radio. Toutefois, rien ne garantit l'absence d'interférences dans une installation particulière.

Toutefois, rien ne garantit l'absence d'interférences dans une installation particulière Si cet équipement provoque des interférences avec la réception radio ou télévision - ce qui peut être déterminé en éteignant et en rallumant l'équipement - il est recommandé à l'utilisateur d'essayer de corriger les interférences par l'un des moyens suivants :

- En réorientant ou en réinstallant l'antenne de réception
- En augmentant la distance entre l'équipement et le récepteur
- En branchant l'équipement à un circuit autre que celui où le récepteur est branché
- En contactant le revendeur ou un technicien expérimenté en radio/télévision

Attention : afin d'assurer la conformité aux exigences de la FCC en matière d'exposition aux RF, placez le Media Connector et le TOPCAT à une distance de 20 cm minimum des personnes les plus proches.

DECLARATION OF CONFORMITY
ACCORDING TO EC LVD DIRECTIVE 2006/42/EC

Manufacturer: Lightspeed Technologies,Inc.

Address: 11509 SW Herman Rd,
Tualatin, Oregon 97062

We Herewith declare, that the following system complies with the appropriate basic safety and health requirements of the Directive based on its design and type, as brought into circulation by us. In case of alteration of the system, not agreed upon by us, this declaration will lose its validity.

Product: TOPCAT SERIES

Model Number(s): TopCAT (TC1881), Media Connector (MC1881)

Conforms to the following EU Directives and the standards stated:

Low Voltage Directive: 73/23/EEC and amendments; UL/IEC 60065, CB Certificate

EMC Directives: 89/336/EEC, 92/31/EEC, 93/68/EEC, 2004/108/EC, EN 55022:2006+A1, ETSI EN 301406V2.1.1 (2009-07), ETSI EN 301 489-6 V1.3.1 (2008-08), EN55024:1998+A1:2001+A2:2003, EN61000-3 & -4 – Generic Immunity Standard, AS/NZS CISPR 22: 2009, Class A – Radiated and Conducted Emissions from Audio Equipment.

Including: EN 301 489-1:2008
EN 61000-3-3:2008
EN 61000-4-2:2001: 1998+A1+A2
EN 61000-4-3:2002: 1998+A1+A2
EN 61000-4-4:2008
EN 61000-4-5:2008
EN 61000-4-6:2008
EN 61000-4-8:2008
EN 61000-4-11:2008

The Technical Construction File is available to proper authorities and the product is CE marked.

LST Representatives:

John Chabot, Compliance Engineer	*Dave Squire, VP of Engineering*	12/5/2011 *Date*

SYSTEM SPECIFICATIONS

OVERALL SPECIFICATIONS

TOPCAT Specifications	
Description	Two-way hybrid speaker system with exciter technology sound panel and low frequency cone driver
Panel Size	16.25" x 8.25"
Frequency Response	60 Hz - 18 kHz @ 10dB
Impedance	4 Ohms
Power Handling	20W RMS
Power Input	AC: 100-240V ~ 50/60Hz 1.5A DC: 24V / 2.5A
Enclosure	24" x 24" x 4" plenum-rated enclosure (UL 2043) / 595mm x 595mm x 101.6mm
Weight	22 lbs / 10 kg

RECEIVER/TRANSMITTER SPECIFICATIONS

Media Connector Module	
Frequency Response	80 Hz to 10 kHz ±3 dB
Signal-to-noise Ratio	>70 dB
Audio Distortion	<1%
Audio Inputs	Four (4) 3.5mm stereo jack
Audio Outputs	One (1) 3.5mm stereo jack with volume control
DC Power Input	5 V / 1.0 Amp, 0.65mm coaxial barrel DC power jack
Mounting	Wall or table-top
Dimensions (L x W x H)	5.75" x 8.75" x 10" / 146mm x 222.3 x 254mm

TRANSMITTER SPECIFICATIONS

REDMIKE VC	
Audio Distortion	< 1 %
Built-in Microphone	Unidirectional Electret
Battery Power (1-year warranty)	1 AA NiMH rechargeable sensing battery
Audio Input	3.5 mm (x1)
Dimensions (W x D x H)	0.9" x 1.0" x 3.5" / 22.86mm x 25.4mm x 88.9mm
Weight	2.1 oz. / 59.53 g

REDMIKE Share	
Audio Distortion	< 1 %
Built-in Microphone	Unidirectional electret
Battery Power (1-year warranty)	2 AA NiMH rechargeable battery pack
Dimensions (W x D x H)	1.25" x 1.25" x 8.25"/ 31.75mm x 31.75mm x 209.55mm
Weight	7.36 oz. / 208.65 g

SYSTEM SPECIFICATIONS CONT'D

INFRARED SENSOR

INTEGRATED SENSOR / RECEIVER (ISR)	
Power	From TOPCAT
Reception Coverage	Rooms up to 1200 sq ft / 110 m^2 (ceiling 12ft / 3.66 or less)
Mounting	Integrated on TOPCAT ceiling clip / wall bracket
Receiving Diodes	32

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11509 SW HERMAN ROAD / TUALATIN, OR 97062
TOLL FREE: 800.732.8999 / PHONE: 503.684.5538 / FAX: 503.684.3197
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